

REMARKS

In connection with the RCE filed herewith, Applicants reply to the Final Office Action dated October 8, 2009 within two months. Claims 38-69 are pending in the application and the Examiner rejects claims 38-69. Applicants amend certain claims and add new claim 70 and respectfully submit that the amendments and new claim find support in the application, claims and drawing figures as originally filed. Applicants respectfully request reconsideration of this application.

Applicants thank the Examiner for the interview conducted November 18, 2009. During the Interview, the Examiner agreed that incorporating “extrapolating a predicted future location of the object” (for example, as recited in amended claim 67) would distinguish over Hyuga, U.S. Patent No. 5,818,733 (“Hyuga”) and the other cited references. Applicants incorporate similar elements into the independent claims and respectfully request allowance of the application. As support for this amendment, Applicants refer to, for example, ¶¶ [0078], [0088], and [0093] in the published application.

The Examiner rejects claims 38-41, 44, 46-49, 52, 54, 56-58, 62, and 64-69 under 35 U.S.C. § 103(a) as being unpatentable over Hyuga in view of Glatt, U.S. Patent No. 6,724,421 (“Glatt”). The Examiner rejects claims 38-41, 44, 46-47, 52, 54, 56-58, 62, and 64-69 under 35 U.S.C. § 103(a) as being unpatentable over Hyuga in view of Araki, et al., U.S. Patent No. 4,737,847 (“Araki”). The Examiner rejects claims 42 and 50 under 35 U.S.C. § 103(a) as being unpatentable over Hyuga in view of Araki and further in view of Anderson, U.S. Patent No. 5,684,476 (“Anderson”), and the Examiner rejects claims 43, 45, 51, 53, 55, 59, 61, and 63 under 35 U.S.C. § 103(a) as being unpatentable over Hyuga in view of Araki and further in view of Bro, U.S. Patent No. 5,722,418 (“Bro”). Applicants respectfully disagree with these rejections, but Applicants present amendments to clarify the patentable aspects of the claims and to expedite prosecution. Additionally, Applicants do not concede that Hyuga, Anderson, Glatt and Bro are in fact prior art with respect to this application, and Applicants reserve the option to antedate Hyuga, Anderson, Glatt and/or Bro.

1. The cited references do not disclose or contemplate “determining a movement vector of a movement of [an] object.”

As noted previously, Hyuga discloses a group of cameras at a location (e.g., a golf course) where each of the cameras are capable of recording an image of an object (e.g., golfer)

located in a particular section of the location (e.g., at the ninth hole green). One of the cameras is selected from a known, current location of the object being observed: “Based on the locational signals from receiver (21), camera controller component (26) selects camera (27i) ~ (27n), (27c) and controls panning and tilting of the selected camera” (Abstract). The location of the object is **known**, for example, by a signal from a “mobile unit which is in the possession of each [golf] player or caddie . . . [which] transmits signals revealing its **location**” (4:14-36). “Therefore, according to the invention, it is easy to **know the location** of the sender of the signals and take his picture with an imaging device” (Hyuga, 2:7-9¹) (emphasis added). Once the system in Hyuga determines **an actual location** of the object to be monitored, a camera **in the actual location** is selected to record an image of the object.

As discussed with the Examiner, Hyuga may disclose determining a location of an object, for example, a location (x,y) of the object on a golf course. This location (x,y) may tell the system what the **distance** is between location (x,y) and a second location (X,Y). However, merely knowing the distance between these two points does not say anything about any actual movement of the object (e.g., velocity, acceleration).² A “**movement** vector” as recited in Applicants’ claims utilizes more information than simply a current location of the object, as is clear by use “of a **movement** of the object” in Applicants’ claims (*see, e.g.*, ¶¶ [0058], [0099], [0115], and [0117] of Applicants’ published application). Therefore, Hyuga does not disclose or contemplate, alone or in combination with the cited references, “determining a movement vector of a **movement** of the object” as recited in claim 56 (emphasis added), and as similarly recited in claims 38, 47, and 67. For at least this reason, Applicants respectfully request allowance of claims 38, 47, 56, and 67.

2. The cited references do not disclose or contemplate “extrapolating a predicted future location of [an] object.”

Applicants do not repeat Applicants’ previous additional arguments with respect to

¹ Column X and line Y are referred to herein as X:Y.

² Column 5, lines 39-53 of Hyuga state, “The **direction** and **distance** to mobile unit 1 from any of imaging devices . . . can be determined . . . In these examples, mobile unit 1 converts the vectorial information of **its location** relative to each of reference antennae 41 or satellites 42, or a combination thereof, into **location in terms of coordinates**, such as latitude and longitude. Consequently, the direction and distance to mobile unit 1 from any one of imaging devices . . . can be computed from the **absolute coordinate locations**” (5:39-53) (emphasis added). As noted in a previous Reply, Hyuga thus merely discloses using location information to determine a **specific current location** of the object, and does not determine “a movement vector” associated with the object as recited in Applicants’ independent claims.

Hyuga, Glatt and Araki, but Applicants maintain those arguments. Furthermore, Applicants note that Araki discloses “An abnormality supervising system comprising a picture input means for monitoring a zone to be supervised . . . to obtain information necessary for an abnormality discrimination” (Araki, 29:21-28). “[O]bjects designated by FIGS. 1 to 5 are known to *have been* [i.e., in the past] moved, and a tracking of the objects is to be effected for identification . . . [W]hen the sampling speed of the picture of the system is lower than the moving speed of the object and there is no overlapping portion between the objects in the input [i.e., *current*] and *previous* pictures [i.e., by the time the system can take another picture, the new picture of the object’s current position does not overlap with the picture of the object’s previous position], the system predicts *a position* of the object upon extraction of the latest input picture [i.e., corresponding to the *current* location of the object]” (Araki, 25:55 through 26:3; emphasis added). For at least this additional reason, Araki does not disclose or contemplate, alone or in combination with the other cited references, “*extrapolating* a predicted *future* location of the object” as recited in Applicants’ claim 67 (emphasis added) and as similarly recited in claims 38, 47, and 56. Rather, Araki discloses “predict[ing, by interpolation,] a [*past*] position of the object” (Araki, 25:69 through 26:1; emphasis added) that occurred sometime “between the objects in the input and previous pictures” (Araki, 25:67-68).

For at least the reasons discussed above, Applicants respectfully submit that independent claims 38, 47, 56 and 67 are allowable over the cited references.

3. The dependent claims are also allowable.

Dependent claims 39-46, 48-55, 57-66, and 68-69 variously depend from independent claims 38, 47, 56, and 67. Therefore, Applicants assert that dependent claims 39-46, 48-55, 57-66, and 68-69 are patentable for at least the same reasons stated above for differentiating independent claims 38, 47, 56, and 67, as well as in view of their own respective features.

For example, with respect to claim 68 and new claim 70, Applicants previously noted that the Examiner asserts that the “first data” in Applicants’ claims is “the location of the object based on the GPS system as disclosed in figure 10” (Office Action dated May 20, 2009, page 2). However, the Examiner does not assert that Hyuga discloses that the “first data” is received *from* “a first detector”; rather, the Examiner asserts that the “first detector” in Hyuga is “e.g., 27-1 of fig. 13” (Office Action, page 2), which is a camera for taking a picture of a patient (see Abstract), and not the “GPS system as disclosed in figure 10.” Furthermore, Applicants


respectfully submit that if Applicants' "first detector" is "27-1 of fig. 13," then Hyuga clearly does not disclose or contemplate, "wherein the movement module is further configured to determine a movement vector of a movement of the object based at least in part on the first data" (as recited in claim 38) because data from Hyuga's "27-1 of fig. 13" is not disclosed to determine "a movement vector of a movement of" anything.

The Examiner agreed in the interview that the following language would distinguish over Hyuga and the cited references: "the first data comprises *visual data* of the object," and "the movement module is configured to determine the movement vector of the movement of the object *based at least in part on the visual data*," as recited in claim 70 (emphasis added), and similarly in claim 68. The Examiner agreed that the image data from 27-1 fig. 13 in Hyuga is not used to "determine the movement vector" as recited in Applicants' claims. For at least this reason, Applicants respectfully request allowance of claims 68 and 70.

In view of the above remarks, Applicants respectfully submit that all pending claims properly set forth that which Applicants regard as their invention and thus respectfully request allowance of the pending claims. The Examiner is invited to telephone the undersigned at the Examiner's convenience, if that would help further prosecution of the subject application. The Commissioner is authorized to charge any fees due to Deposit Account No. 19-2814.

Respectfully submitted,

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